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Credit Card Expiration Date (mm/yyyy): 06/2028

Name as it Appears on Credit Card: CLAYTON A MCKINNEY

Payment Amount (US Dollars): \$

Cardholder Signature: Clayton McKinney Date (mm/dd/yyyy): 03/19/2025

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City: Bremerton

State/Province: Washington

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Daytime Phone #: 253-320-9118

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Description of Request and Payment Information:

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Application No.	Application No.	Application No.	IDON Customer No.
Patent No.	Patent No.	Registration No.	
Attorney Docket No.		Identify or Describe Mark	

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**FEE TRANSMITTAL**

(page 1 of 2)

Complete if known

☐ Applicant asserts small entity status. See 37 CFR 1.27.☒ Applicant certifies micro entity status. See 37 CFR 1.29. Form PTO/SB/15A or B or equivalent must either be enclosed or have been submitted previously.

TOTAL AMOUNT OF PAYMENT

(\$)

Application Number

Filing Date

First Named Inventor

Examiner Name

Art Unit

Practitioner Docket No.

Clayton A. McKinney

**METHOD OF PAYMENT** (check all that apply)☐ Check ☐ Credit Card ☐ Money Order ☐ None ☒ Other (please identify): Debit card☐ Deposit Account: Deposit Account Number: \_\_\_\_\_ Deposit Account Name: \_\_\_\_\_ For the above-identified deposit account, the Director is hereby authorized to (check all that apply):☐ Charge fee(s) indicated below☐ Charge fee(s) indicated below, except for the filing fee☐ Charge any additional fee(s) or underpayment of fee(s) under 37 CFR 1.16 and 1.17☐ Credit any overpayment of fee(s)**WARNING:** Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.**FEE CALCULATION****1. BASIC FILING, SEARCH, AND EXAMINATION FEES** (U = undiscounted fee; S = small entity fee; M = micro entity fee)

Application Type	FILING FEES			SEARCH FEES			EXAMINATION FEES			Fees Paid (\$)
	U (\$)	S (\$)	M (\$)	U (\$)	S (\$)	M (\$)	U (\$)	S (\$)	M (\$)	
Utility	350	140*	70	770	308	154	880	352	176	
Design	300	120	60	300	120	60	700	280	140	
Plant	240	96	48	485	194	97	725	290	145	
Reissue	350	140	70	770	308	154	2,550	1,020	510	
Provisional	325	130	65	0	0	0	0	0	0	<u>\$65.00</u>

\* The \$140 small entity filing fee for a utility application is further reduced to \$70 for a small entity applicant who files the application via Patent Center.

**2. EXCESS CLAIM FEES**

Fee Description	Undiscounted Fee (\$)	Small Entity Fee (\$)	Micro Entity Fee (\$)
Each claim over 20 (including Reissues)	200	80	40
Each independent claim over 3 (including Reissues)	600	240	120
Multiple dependent claims	925	370	185

<b>Total Claims</b>		<b>Extra Claims</b>	<b>Fee (\$)</b>	<b>Fee Paid (\$)</b>
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<u>20</u>	-20 or HP =	<u>0</u>	x	<u>70</u>	=	<u>0</u>
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HP = highest number of total claims paid for, if greater than 20.

<b>Indep. Claims</b>		<b>Extra Claims</b>	<b>Fee (\$)</b>	<b>Fee Paid (\$)</b>
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<u>3</u>	-3 or HP =	<u>0</u>	x	<u>70</u>	=	<u>0</u>
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paid for, if greater than 3.

<b>Multiple Dependent Claims</b>	<b>Fee (\$)</b>	<b>Fee Paid (\$)</b>
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HP = highest number of independent claims

**3. APPLICATION SIZE FEE**

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$450 (\$180 for small entity) (\$90 for micro entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

<b>Total Sheets</b>	<b>Extra Sheets</b>	<b>Number of each additional 50 or fraction thereof</b>	<b>Fee (\$)</b>	<b>Fee Paid (\$)</b>
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<u>      </u> - 100 =	<u>      </u> / 50 =	<u>      </u> (round up to a whole number)	x	<u>      </u>
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(page 1 of 2)

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(\$) 65.00

Application Number

Filing Date

First Named Inventor

Examiner Name

Art Unit

Practitioner Docket No.

Clayton A. McKinney**METHOD OF PAYMENT** (check all that apply)

- ☐ Check ☐ Credit Card ☐ Money Order ☐ None ☒ Other (please identify): DEBIT CARD

- ☐ Deposit Account Deposit Account Number: \_\_\_\_\_ Deposit Account Name: \_\_\_\_\_ For the above-identified deposit account, the Director is hereby authorized to (check all that apply):

- ☐ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, except for the filing fee
- ☐ Charge any additional fee(s) or underpayment of fee(s) under 37 CFR 1.16 and 1.17 ☐ Credit any overpayment of fee(s)

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		x					
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		x					
paid for, if greater than 3.					HP = highest number of independent claims		

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Total Sheets	- 100 =	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fee Paid (\$)
		/ 50 =	(round up to a whole number) x		

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**PROVISIONAL APPLICATION FOR PATENT COVER SHEET – Page 1 of 2**

This is a request for filing a PROVISIONAL APPLICATION FOR PATENT under 37 CFR 1.53(c).

Priority Mail Express® Label No. \_\_\_\_\_

INVENTOR(S)		
Given Name (first and middle (if any))	Family Name or Surname	Residence (City and either State or Foreign Country)
Clayton Alexander	McKinney	Bremerton, Washington

Additional inventors are being named on the \_\_\_\_\_ separately numbered sheets attached hereto.

**TITLE OF THE INVENTION (500 characters max):**"Fractal-Based Method and System for Modeling  
Complex Systems with Ethical Safeguards across  
Multiple Domains."

Direct all correspondence to:

**CORRESPONDENCE ADDRESS**☒ The address corresponding to Customer Number:217 Kingsway NW  
claytonmckinney@tzi9.com

OR

☒ Firm or  
Individual Name

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City Bremerton

State Washington

Zip 98312

Country United States of America

Telephone 253-320-9118

Email claytonmckinney@tzi9.com

**ENCLOSED APPLICATION PARTS (check all that apply)**☐ Application Data Sheet. See 37 CFR 1.76.☐ CD(s), Number of CDs \_\_\_\_\_☒ Drawing(s) Number of Sheets 4☐ Other (specify) \_\_\_\_\_☒ Specification (e.g., description of the invention) Number of Pages \_\_\_\_\_**Fees Due:** Filing Fee of \$325 (\$130 for small entity) (\$65 for micro entity). If the specification and drawings exceed 100 sheets of paper, an application size fee is also due, which is \$450 (\$180 for small entity) (\$90 for micro entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).**METHOD OF PAYMENT OF THE FILING FEE AND APPLICATION SIZE FEE FOR THIS PROVISIONAL APPLICATION FOR PATENT**☐ Applicant asserts small entity status. See 37 CFR 1.27.☒ Applicant certifies micro entity status. See 37 CFR 1.29.

Applicant must attach form PTO/SB/15A or B or equivalent.

☐ A check or money order made payable to the Director of the United States Patent

and Trademark Office is enclosed to cover the filing fee and application size fee (if applicable).

☒ Payment by credit card. Form PTO-2038 is attached.☐ The Director is hereby authorized to charge the filing fee and application size fee (if applicable) or credit any overpayment to Deposit

Account Number: \_\_\_\_\_

65.00

**TOTAL FEE AMOUNT (\$)****USE ONLY FOR FILING A PROVISIONAL APPLICATION FOR PATENT**

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PTO/SB/16 (01-25)  
**PROVISIONAL APPLICATION FOR PATENT COVER SHEET – Page 2 of 2**

The invention was made by an agency of the United States Government or under a contract with an agency of the United States Government. (NOTE: Providing this information on a provisional coversheet, such as this Provisional Application for Patent Cover Sheet (Form PTO/SB/16), does not satisfy the requirement of 35 U.S.C. 202(c)(6), which requires that the specification contain a statement specifying that the invention was made with Government support and that the Government has certain rights in the invention.)

☒ No.

☐ Yes, the invention was made by an agency of the U.S. Government. The U.S. Government agency name is: \_\_\_\_\_

☐ Yes, the invention was made under a contract with an agency of the U.S. Government.

The contract number is: \_\_\_\_\_

The U.S. Government agency name is: \_\_\_\_\_

In accordance with 35 U.S.C. 202(c)(6) and 37 CFR 401.14(f)(4), the specifications of any United States patent applications and any patent issuing thereon covering the invention, including the enclosed provisional application, must state the following:

"This invention was made with government support under [IDENTIFY THE CONTRACT] awarded by [IDENTIFY THE FEDERAL AGENCY]. The government has certain rights in the invention."

**WARNING:**

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.

SIGNATURE

Clayton McKinney

DATE

03/19/25  
March 19, 2025

TYPED OR PRINTED NAME

Clayton A. McKinney

REGISTRATION NO. \_\_\_\_\_

(if appropriate)

TELEPHONE

253-320-9118

DOCKET NUMBER \_\_\_\_\_



# Provisional Patent Application Draft

## Title

*"Fractal-Based Method and System for Modeling Complex Systems with Ethical Safeguards Across Multiple Domains"*

## Background and Field of Invention

This invention relates to the field of complex systems modeling and optimization. Specifically, it introduces a novel method and system based on fractal principles to identify multi-scale patterns, optimize processes across scales, and embed ethical safeguards for responsible use. Applications include artificial intelligence alignment, cellular aging research, systemic transparency tools, environmental sustainability, and adaptive learning systems.

## Summary of the Invention

The invention provides a proprietary framework that leverages fractal principles to analyze complex systems. The framework consists of:

1. **Multi-Scale Pattern Recognition:** Identifying recurring patterns across different scales within datasets.
2. **Optimization Algorithms:** Utilizing proprietary functions to improve system efficiency and adaptability.
3. **Ethical Safeguards:** Embedding mechanisms to ensure responsible use and prevent misuse.

The system achieves superior scalability, adaptability, and accuracy compared to conventional methods. It has broad applications in fields such as:

- **Artificial Intelligence (AI):** Aligning AI systems with human values through ethical decision-making frameworks.
- **Longevity Science:** Optimizing biological processes to extend healthspan.
- **Transparency Tools:** Empowering systemic reform by analyzing financial flows and exposing corruption.
- **Environmental Sustainability:** Modeling resource optimization for ecosystems.
- **Education:** Developing adaptive learning systems tailored to diverse populations.

## Detailed Description

### 1. Problem Addressed

Current methods for modeling complex systems are often limited by scale-specific approaches that fail to capture patterns across multiple levels of granularity.

Additionally, these methods lack embedded ethical safeguards, leading to potential misuse in sensitive domains like AI or healthcare.

### 2. Solution Provided

This invention introduces a fractal-based method that overcomes these limitations by:

1. Identifying patterns that recur across scales (e.g., micro to macro levels).
2. Applying proprietary algorithms that optimize processes while maintaining ethical constraints.
3. Ensuring adaptability across diverse domains through modular system design.

### 3. Key Features

#### Multi-Scale Pattern Recognition

- The system analyzes datasets using fractal principles to identify recurring structures at different scales.
- Example: In AI alignment, the system models decision-making frameworks that align with human values at both individual and societal levels.

#### Optimization Algorithms

- Proprietary functions (e.g.,  $F(x) = A[B(x)]$ ) are applied to optimize processes while preserving scalability and adaptability.
- Example: In longevity science, the system models cellular aging processes and identifies interventions that optimize healthspan.



## Ethical Safeguards

- Embedded mechanisms detect potential misuse or unethical applications.
- Example: In transparency tools, safeguards prevent tampering with data integrity during corruption investigations.

## Examples of Applications

### 1. Artificial Intelligence Alignment:

- The system models ethical decision-making frameworks using fractal principles, ensuring AI systems align with human values at multiple scales (e.g., individual decisions vs societal impact).

### 2. Longevity Science:

- By modeling cellular aging processes across scales (e.g., molecular → organ systems), the system identifies interventions that optimize biological functions for extended healthspan.

### 3. Transparency Tools:

- The system analyzes financial flows using multi-scale pattern recognition to expose corruption in lobbying or procurement practices.

## Drawings/Diagrams

### Placeholder Visuals:

#### 1. Flowchart illustrating the process:

- Input Data → Fractal Analysis → Optimized Output.

#### 2. Diagram of multi-scale pattern recognition:

- Visual representation of recurring structures at micro and macro levels.

## **Novelty and Advantages**

### **1. Novelty:**

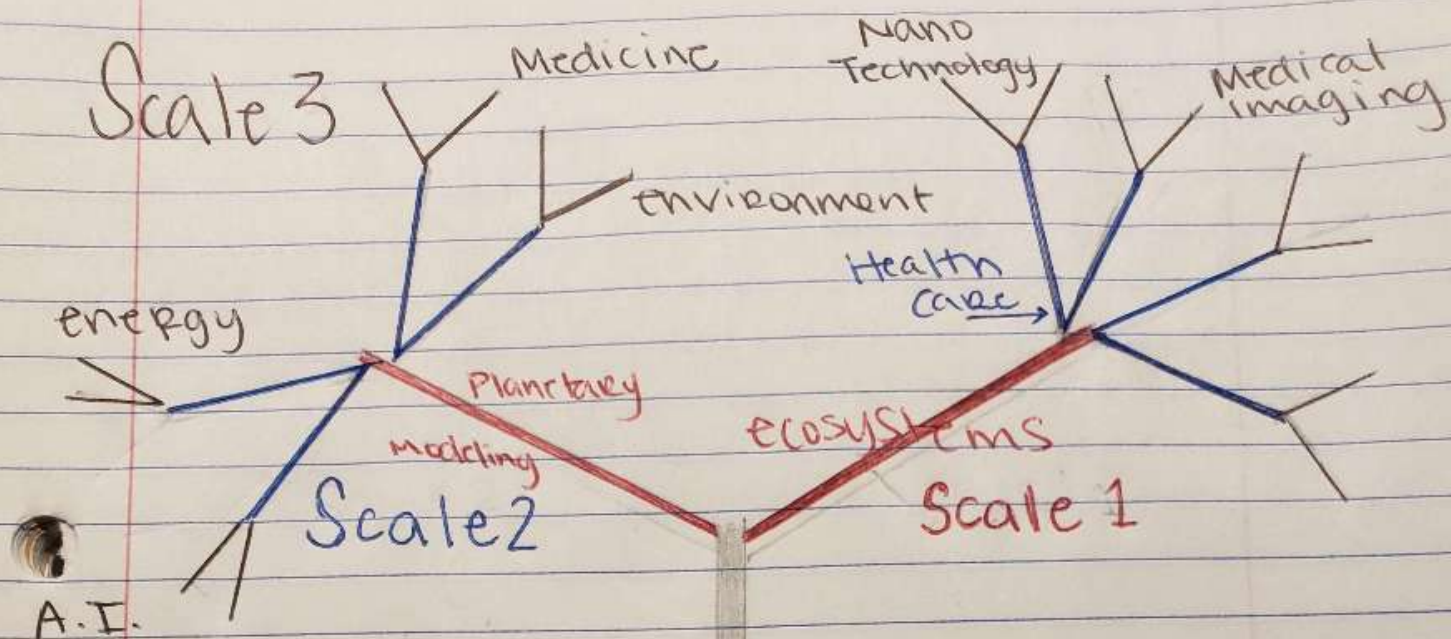
- Use of fractal principles for multi-scale optimization is unique compared to existing single-scale approaches.
- Ethical safeguards embedded into the framework distinguish this invention from other modeling methods.

### **2. Advantages:**

- **Scalability:** The system adapts seamlessly across domains (e.g., AI ethics, healthcare).
- **Accuracy:** Fractal-based analysis improves precision in identifying patterns.
- **Responsibility:** Ethical safeguards ensure responsible use in sensitive applications.

## **Conclusion**

This invention represents a significant advancement in complex systems modeling by leveraging fractal principles for multi-scale optimization while embedding ethical safeguards. Its broad applicability across AI alignment, longevity science, transparency tools, environmental sustainability, and education makes it a transformative solution for addressing global challenges.



Fractals exhibit repeating patterns at different scales enabling accurate modeling of complex systems.



Complex Problem

Sub Problem 1

Climate Region

ex: Tropical

Sub Problem 2

Climate Region

ex: polar

Sub Problem 3

Climate Region

ex: desert

Recursive Steps

Polar:

Arctic

Antarctica

High Mtn

\* Recursion enables Scalable Solutions by solving smaller components iteratively \*

Optimized Solution



Small Scale  
Nano

Medium Scale

Health Care: Diagnostics

Medium Scale

Health Care: Optimization

Planetary  
ecosystems

Large Scale

Environmental  
modeling  
Large Scale

Fractal Principles enable  
solutions across scales -  
from nanoscale materials  
to Planetary ecosystems.